3Com® Unified Gigabit Wireless PoE Switch 24

Quick Start Guide

Kurzanleitung

3CRUS2475

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Part Number 10015246 Rev. AA
Published September 2006

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About this Guide

This guide is intended for use by those responsible for installing and setting up network equipment; consequently, it assumes a basic working knowledge of LANs (local area networks) and WLANs (wireless local area networks).

Diese Anleitung ist fur die Benutzung durch Netzwerkadministratoren vorgesehen, die fur die Installation und das einstellen von Netzwerkkomponenten verantwortlich sind; sie setzt Erfahrung bei der Arbeit mit LANs (Local Area Networks) und WLANs (Wireless Local Area Networks) voranus.

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Get the latest documentation and software for your 3Com switch

Thank you for purchasing a 3Com® Unified Gigabit Wireless PoE Switch 24. As part of our commitment to help you get the most out of your 3Com network equipment, we offer updated documentation and software on our website.

In addition to this Quick Start Guide*, a detailed* User Guide *and a* Command Line Interface Guide *are also available on the 3Com website.*

To obtain the most up-to-date user documentation and operating software for the 3Com Unified Switch 24, point your web browser to: **www.3Com.com** and select the "Support and Registration" link.

Please note that you must register your 3Com switch to receive software upgrades. To register, point your web browser to **eSupport.3Com.com**.

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1 Introducing the 3Com Unified Gigabit Wireless PoE Switch 24

Figure 1 Front and Rear Views of the Unified Switch 24

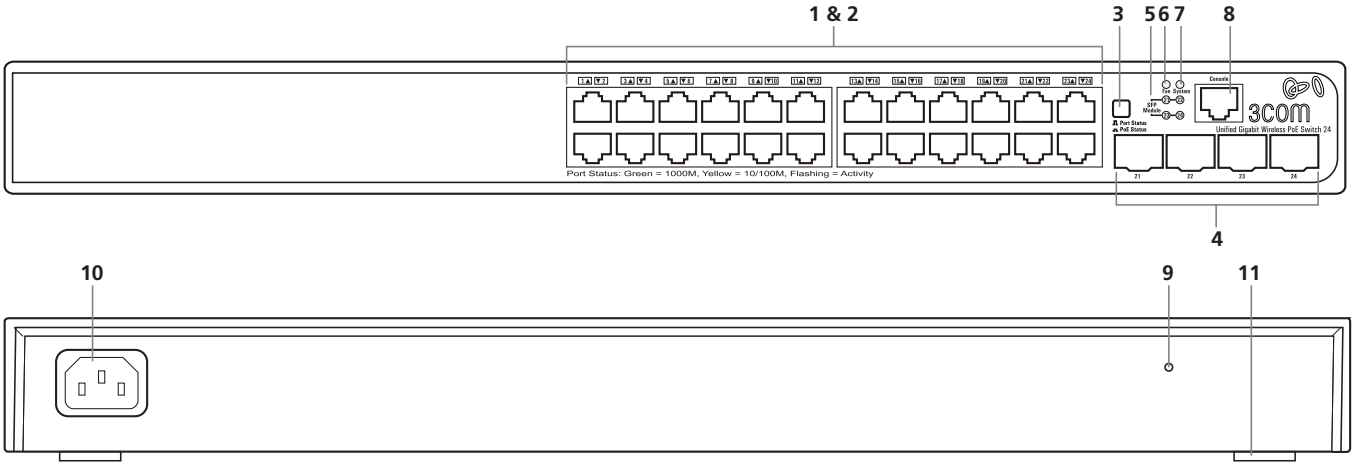

Table 1 Features of the Unified Switch 24

Reference	Description
1	**10/100/1000 Mbps Network Ports (1–24):** These autonegotiating ports determine the speed and duplex mode based on the connected device. Each port supports automatic MDI/MDIX detection and can be connected to a 10BASE-T, 100BASE-T, or 1000BASE-T device.
2	**LED Port Status Indicators:** Each Network Port has a corresponding status indicator (1 to 24) that shows the status of the port's network connection or PoE status (depending on the LED Status Select button). ***Port Speed*** ■ Green steady: 1000 Mbps link is present. ■ Green flashing: 1000 Mbps traffic is present. ■ Amber steady: 10/100 Mbps link is present. ■ Amber flashing: 10/100 Mbps traffic is present. ■ Off: Link is not present ***PoE Status*** ■ Green steady: PoE Power is being delivered to the port ■ Off: No power is being delivered.

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Table 1 Features of the Unified Switch 24 (continued)

Reference	Description
3	**LED Status Select Button:** This button sets the function of the Port LED indicators. When the button is in the out position, the port LEDs show the port speed (see #2 above). When the button is pressed in, the port LEDs show the PoE status.
4	**SFP Module Slots (21–24):** The four Small Form Factor Pluggable (SFP) transceiver slots allow you to install an SFP transceiver (purchased separately). These ports support fiber Gigabit Ethernet short-wave (SX) and long-wave (LX) SFP transceivers in any combination. When an SFP module is installed in a slot and is active, the associated RJ-45 port (21 to 24) of the same number is disabled.
5	**SFP Module Status Indicator:** The four SFP status LED indicators show the state of the SFP module ports (21 to 24; see #4). ■ Green: An SFP fiber module is present. ■ Off: No fiber module is present. When an SFP module is present, the fiber port activity is indicated by the corresponding LED over the RJ-45 port (21 to 24): ■ Green steady: Fiber link is present. ■ Green flashing: Fiber link traffic is present. ■ Off: Link is not present
6	**Fan Indicator:** Shows the status of the internal fans. Green steady: All fans are functioning properly. Amber steady: The switch is too hot. Amber flashing: One or more fans have failed
7	**System Indicator:** Shows the overall status of the switch. ■ Green steady: The switch is powered-up and operating normally. ■ Green flashing: The switch is undergoing self test, initialization, or downloading. ■ Amber steady: The switch has detected a hardware malfunction such as temperature, fan, or voltage. ■ Off: No power. The switch is off.
8	**Console Port:** Allows you to connect a terminal and perform out-of-band management. The default communications settings are 19200 bps, 8 data bits, no Parity, 1 stop bit.
9	**Reset Button:** Use the reset button to restore the switch to its factory defaults. See "Restoring the Factory Default Settings" on page 29.
10	**AC Power Input:** Accepts 100–240 Vac, 50/60 Hz input power. The switch automatically adjusts to the input voltage.
11	**Feet:** These are self-adhesive pads. You do not need to install them if you are rack-mounting the switch.

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WARNING: *The Network Ports are shielded RJ-45 data sockets. They cannot be used as standard traditional telephone sockets, or to connect the unit to a traditional PBX or public telephone network. Connect only RJ-45 data connectors, network telephony systems, or network telephones to these sockets.*

Either shielded or unshielded data cables with shielded or unshielded jacks can be connected to these data sockets.

AVERTISSEMENT: *Points d'accès RJ-45. Ceux-ci sont protégés par des prises de données. Ils ne peuvent pas être utilisés comme prises de téléphone conventionnelles standard, ni pour la connection de l'unité à un réseau téléphonique central privé ou public. Raccorder seulement connecteurs de données RJ-45, systèmes de réseaux de téléphonie ou téléphones de réseaux à ces prises.*

Il est possible de raccorder des câbles protégés ou non protégés avec des jacks protégés ou non protégés à ces prises de données.

WARNHINWEIS: *RJ-45-Porte. Diese Porte sind geschützte Datensteckdosen. Sie dürfen weder wie normale traditionelle Telefonsteckdosen noch für die Verbindung der Einheit mit einem traditionellem privatem oder öffentlichem Telefonnetzwerk gebraucht werden. Nur RJ-45-Datenanscluße, Telefonnetzsysteme or Netztelefone an diese Steckdosen anschließen.*

Entweder geschützte oder ungeschützte Buchsen dürfen an diese Datensteckdosen angeschlossen werden.

Overview of the Unified Gigabit Wireless PoE Switch 24

The 3Com® Unified Gigabit Wireless PoE Switch 24 is a versatile, easy-to-use unified switch. It is shipped ready for use, and no configuration is necessary for operation as a basic Layer 2 Gigabit PoE switch. Additional features such as wireless can be configured easily using the Web-based user interface and setup wizard. Support for PoE and voice auto-prioritization makes the Unified Switch 24 a perfect starting point for IP telephony solutions.

Unified Switching

A *unified switch* is an all-in-one, fully-managed Ethernet switch combining gigabit, wireless, and PoE connectivity in a single platform. The Unified Switch 24 supports both wired Ethernet switching and centralized control for up to 24 wireless access points.

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Wired Features

The switch has 24 shielded RJ-45, 10/100/1000 Mbps auto-negotiating ports and four Small Form Factor Pluggable (SFP) transceiver slots on the front panel.

The four SFP ports support fiber Gigabit Ethernet short-wave (SX) and long-wave (LX) SFP transceivers in any combination. This offers you the flexibility of using SFP transceivers to provide connectivity between the switch and a 1000 Mbps core network.

When an SFP port is in operation, the corresponding 10/100/1000BASE-T port (21 to 24) is disabled.

Power over Ethernet (PoE) Features

The switch can provide Power over Ethernet (PoE) to 802.3af compliant devices over a Category 5 or better Ethernet cable. The switch can supply up to 15.4 Watts of PoE to each of the 24 gigabit ports simultaneously. PoE (802.3af) is a self-configuring protocol. When you plug an 802.3af device into one of the gigabit ports on the switch, the switch will supply the required power to the device.

Wireless Features

The 3Com Unified Switch 24 provides centralized control for up to 24 3Com 7760 or 8760 Access Points. Key wireless features include:

- Enterprise-grade WPA2/AES encryption
- 802.1X authentication
- Centralized control for wireless security profiles
- Fast roaming
- Rogue AP detection and mitigation
- Multiple SSIDs per radio
- Traffic prioritization
- Load balancing

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2 Installing the 3Com Unified Switch 24

Checking the Package Contents

The Unified Switch 24 package includes the following items:

- One 3Com Unified Gigabit Wireless PoE Switch 24 unit
- One power cord
- Four standard height, self-adhesive rubber pads
- One mounting kit
- One warranty flyer and one safety flyer
- This *Quick Start Guide*

If any of the above items are damaged or missing, please contact your network supplier immediately.

WARNING: *Before installing this switch, please read the safety flyer included with the unit.*

GEFAHR: *Lesen Sie bitte vor Installation des Switch das diesem Gerät beiliegende Sicherheitsblatt durch.*

Choosing a Suitable Location

The switch can be free-standing (see "Free-Standing Installation" on page 12), or it can be mounted in a 19-inch equipment rack using the supplied mounting kit (see "Rack-Mount Installation" on page 13). When deciding where to position the switch, ensure that:

- It is accessible and cables can be connected easily.
- Cabling is away from sources of electrical noise. These include elevator shafts, microwave ovens, and air-conditioning units. Electromagnetic fields can interfere with the signals on copper cabling and introduce errors, and, consequently, slow down your network.
- Water or moisture cannot enter the case of the unit.

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- Air flow around the unit and through the vents on the side of the case is not restricted. 3Com recommends that you provide a minimum of 25 mm (1 in.) clearance.
- The air is as free of dust as possible.
- Temperature operating limits are not likely to be exceeded. 3Com recommends that you install the switch in a clean, air conditioned environment.

When installing network equipment, it is always good practice to wear an antistatic wrist strap that is connected to a ground point. If one is not available, try to keep in contact with a grounded rack and avoid touching the unit's ports and connectors. Static discharge can cause reliability problems in your equipment.

Aufstellen des Switch

Bei der Entscheidung wo Sie den Switch positionieren, stellen Sie sicher das:

- Der Switch zugänglich ist und die Kabel leicht angeschlossen werden können.
- Die Kabel nicht in der nähe von elektrischen Störquellen befinden. Das schließt Aufzugsschächte, Mikrowellen und Klimaanlagen ein. Elektromagnetische Felder können die Signale in den Kupferleitungen stören, und Fehler verursachen, was die Verlangsamung Ihres Netzwerkes zur Folge haben kann.
- Weder Wasser noch Feuchtigkeit in das Gehäuse eindringen kann.
- Die Luftzirkulation um den Switch und durch die Öffnungen des Gehäuses nicht behindert wird. 3Com empfiehlt das Sie 25mm (1 Inch) Zwischenraum sicherstellen.
- Die Luft so frei wie möglich von Staub ist.
- Es unwahrscheinlich ist das die Betriebstemperatur überschritten wird. 3Com empfiehlt das Sie den Switch in einer sauberen, klimatisierten Umgebung installieren.

Free-Standing Installation

Place the switch on a stable, flat surface where it is not likely to be disturbed. Do not place objects on top of the switch or on top of a stack of switches. When locating the unit, you should take note of the guidelines given in "Choosing a Suitable Location" on page 11.

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If you are installing the switch in a free-standing stack with other 3Com equipment, arrange the smaller units above the larger ones. Do not have a free-standing stack of more than four units.

Placing Units On Top of Each Other

If the switch units are free-standing, up to four units can be placed one on top of the other. If you are mixing a variety of 3Com equipment, the smaller units must be positioned at the top.

If you are placing switch units one on top of the other, you must use the self-adhesive rubber pads supplied. Apply the pads to the underside of each switch, sticking one in the marked area at each corner.

Rack-Mount Installation

The switch is one rack-unit (1U, or 1.75 in.) high and will fit in a standard 19-inch equipment rack. The supplied mounting kit includes two mounting brackets and four screws. When rack-mounting the unit, you should take note of the guidelines given in "Choosing a Suitable Location" on page 11.

CAUTION: *Disconnect all cables from the unit before continuing. Remove the self-adhesive pads from the underside of unit, if already fitted.*

1. Place the unit on a hard, flat surface with the front facing towards you.
2. Position a mounting bracket over the mounting holes on one side of the unit. Refer to Figure 2 "Attaching Rack-Mount Hardware" on page 14.
3. Insert the screws supplied in the mounting kit and fully tighten with a suitable screwdriver.
4. Repeat the two previous steps for the other side of the unit.
5. Insert the unit into the 19-inch rack and secure with suitable screws (not provided).
6. Reconnect all cables.

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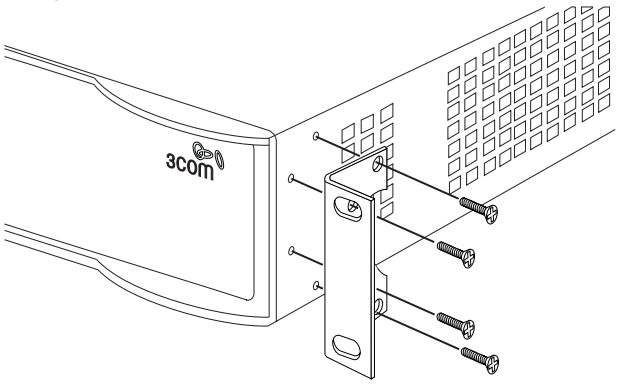
Figure 2 Attaching Rack-Mount Hardware



Montagesatz Anweisungen

Der Switch wird mit zwei Halterungen und vier Schrauben geliefert. Diese werde für den Einbau in einen Baugruppenträger benutzt. Bei der Montage der Baugruppe beachten Sie die Anweisungen aus "Aufstellen des Switch".

Der Switch ist eine Baueinheit hoch und passt in einen Standard 19'' (Zoll) Baugruppenträger.

ACHTUNG: *Entfernen Sie alle Kabel, bevor Sie fortfahren. Entfernen Sie die selbstklebenden Polster (Füße) von der Unterseite der Baugruppe, falls diese bereits angebracht sind.*

1. Plazieren Sie die Baugruppe aufrecht auf einer harten, ebenen Fläche mit der Vorderseite zu Ihnen.
2. Ordnen Sie eine der Halterungen über den Löchern an der Seite der Baugruppe an.
3. Stecken Sie zwei der mitgelieferten Schrauben in die Löcher und drehen Sie diese mit einem geeigneten Schraubendreher fest.
4. Widerholen Sie letzten beiden Schritte auf der anderen Seite der Baugruppe.
5. Führen Sie die Baugruppe in den 19" (Zoll) Baugruppenträger ein und sichern sie die Baugruppe mit geeigneten Schrauben. (Nicht im Lieferumfang enthalten.)
6. Schließen Sie alle Kabel wieder an.

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Supplying Power

Ensure that the power input to your system is clean and free from sags and surges to avoid unforeseen network outages.

Before powering on the switch, verify that the power cable is securely connected.

CAUTION: *The switch has no On/Off switch; the only method of connecting or disconnecting main power is by connecting or disconnecting the power cord.*

CAUTION: *Connect the switch to a properly grounded electrical outlet using only the supplied power cord.*

1. Plug the power cord into the power socket on the rear panel of the switch. See page 8 for more information.
2. Plug the other end of the power cord into a properly-grounded outlet.

   When the switch is powered on, the System LED lights. If the System LED does not light, see "Checking for Correct Operation" on page 16 for more information.

Stromversorgung

Stellen Sie sicher, dass der Stromeingang zum System frei ist und vor Unter- und Überspannungen geschützt ist.

Bevor Sie den Switch mit Strom versorgen, stellen Sie sicher, dass das Netzkabel sicher eingesteckt ist.

WARNUNG: *Der Switch hat keinen Ein/Aus-Schalter; die einzige Methode zum Verbinden oder Trennen vom Stromnetz ist es, das Netzkabel ein- oder auszustecken.*

WARNUNG: *Verbinden Sie den Switch nur mit dem mitgelieferten Netzkabel und einem ordnungsgemäß geerdeten Stromanschluss.*

1. Stecken Sie das Netzkabel in den Stromanschluss auf der Hinterseite des Switch. Weitere Informationen finden Sie auf page 8.
2. Stecken Sie das andere Ende des Stromkabels in einen ordnungsgemäß geerdeten Stromzugang.

   Wenn der Switch mit Strom versorgt wird, leuchtet die System-LED. Wenn die System-LED nicht leuchtet, finden Sie unten weitere Informationen unter "Checking for Correct Operation" on page 16.

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Checking for Correct Operation

After you power-on the switch, it automatically performs a power-on self-test (POST). During the POST, the System LED on the front panel of the switch flashes green.

When the POST is complete, the System LED turns green. If the System LED turns amber after the POST, it means that POST failed. Table Table 2 summarizes the possible colors for the System LED after a POST.

Table 2 Possible System LED Colors After a POST

Color	State
Green	The unit is powered on and ready for use.
Amber	Power-on self-test or loopback test failed. This indicates that there is a hardware malfunction.
Off	The unit is not receiving power: ■ Verify that the power cord is connected correctly, and then try powering on switch again. ■ If the switch still does not operate, contact your 3Com network supplier

If POST fails, try the following:

- Power off the Switch 24 and then power it on again by unplugging and then plugging in the power cord.
- Check the System LED and determine if the POST was successfully completed.
- Reset the switch to the factory defaults. See "Reset Button" on page 8.

CAUTION: *Resetting the switch to its factory defaults erases all your settings. You will need to reconfigure the switch after you reset it.*

If these do not resolve the issue:

- Check the 3Com Knowledgebase for a solution. To visit the 3Com Knowledgebase Web site, start your Web browser, and then enter

  http://knowledgebase.3Com.com
- Contact your 3Com network supplier for assistance.

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3 Connecting to the 3Com Unified Switch 24

This section describes how to connect to the 3Com® Unified Switch 24 and interact with the Web-based user interface. The user interface allows you to control the operation of the switch and configure its features.

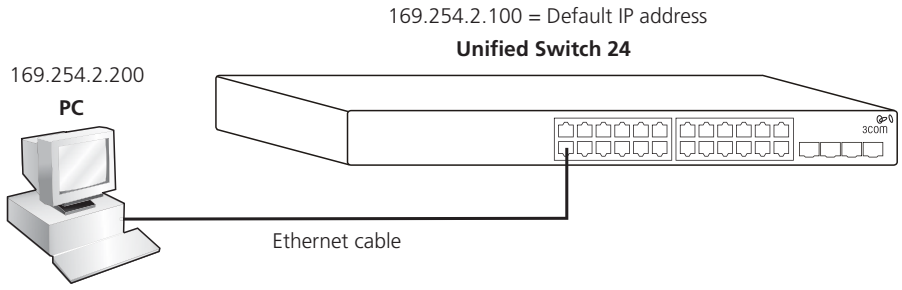
Before you begin

The following items are required before you can connect to your Unified Switch 24:

- A Windows PC with Internet Explorer version 6.0 or greater is required for using the Web-based user interface
- A DHCP server is required to use the wireless features of the switch. The DHCP server is used to assign IP addresses to the managed access points.

Connecting your computer to the switch

To configure your switch for the first time, you must connect your computer directly to the switch.



1. Make sure that the switch is powered on (see "Supplying Power" on page 15).
2. Connect a network cable from your computer's Ethernet port to any Ethernet port on the Unified Switch 24.

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CAUTION: *Do not connect any network cable to the Console port on the switch. Connect only to the Ethernet ports.*

3 Ensure that your computer is on the same subnet as the switch.

NOTE: *The switch's default IP address is 169.254.2.100.*

a If your computer is using static IP addressing, ensure that its address is within the same subnet as the switch, for example 169.254.2.200.

b If your computer is not using static IP addressing, Windows will automatically assign an IP address in the correct subnet.

4 Start your Web browser and type the switch's IP address into the address bar: **http://169.254.2.100**.

Using the setup wizard

The Unified Switch 24 can be configured through its web interface using either the feature menu items, or by using the Setup Wizard. This section describes how to use the Setup Wizard to quickly configure your switch for basic Layer 2 and wireless networking. The wizard guides you through configuring the system settings, IP settings, wireless settings, and saving your changes. For complete configuration information, refer to the *User Guide*.

1 If you have not done so already, access the switch's Web user interface by typing the switch's IP address into the address bar of your Web browser: **http://169.254.2.100**.

2 Log onto the switch by entering the user name and password and clicking the **Login** button.

- The default username is **admin**.
- The default password is blank (no entry).

3 Launch the Setup Wizard by clicking the **Wizard** tab.

A welcome screen is displayed, showing the switch's current configuration. You will use the **Next** and **Back** buttons to navigate the wizard and configure your switch.

4 Use the **Next** button to access the System Setup page. If you want to use wireless, you must check **Master Radio Enable** and select the appropriate **Country Code**. This setting is used to determine the allowable radio channels for your access points. The System Name, Location, and Contact are optional.

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5 Use the **Next** button to access the IP Configuration page and choose either Static or DHCP addressing.

For most installations, 3Com recommends that you configure the switch with a static IP address. This makes management simpler and more reliable, as it eliminates the risk of the switch's IP address changing.

Take a moment to record the IP settings you select.

IP Address: _____

Subnet Mask: _____

Default Gateway: _____

6 Use the **Next** button to access the Wireless Configuration page. Set the default SSID and security that will be applied to all your access points.

This allows you to quickly setup a secure wireless network. You can change these parameters later if you wish. For complete wireless configuration information, refer to the *User Guide*.

Take a moment to record the wireless settings you select.

SSID: _____

Security Type: _____

Passphrase: _____

VLAN ID: _____

7 Use the **Next** button to access the Wizard Summary page. Review your settings and use the **Back** button if you wish to make any changes. When you are satisfied with your settings click the **Finish** button to complete the wizard and save your settings.

8 If you have changed the default IP address of the switch, follow these steps to log onto the switch:

a After you click **Finish**, click **OK** to confirm the changed IP address.

b Configure your PC's IP address to have the same subnet as the switch.

c Log onto the switch again using the new IP address.

9 Select **Save Configuration** to store your switch settings to the startup configuration.

10 The switch is now fully configured for basic Layer 2 networking. If you wish to use the switch's wireless features, continue with the steps in "Preparing the wireless network" on page 20.

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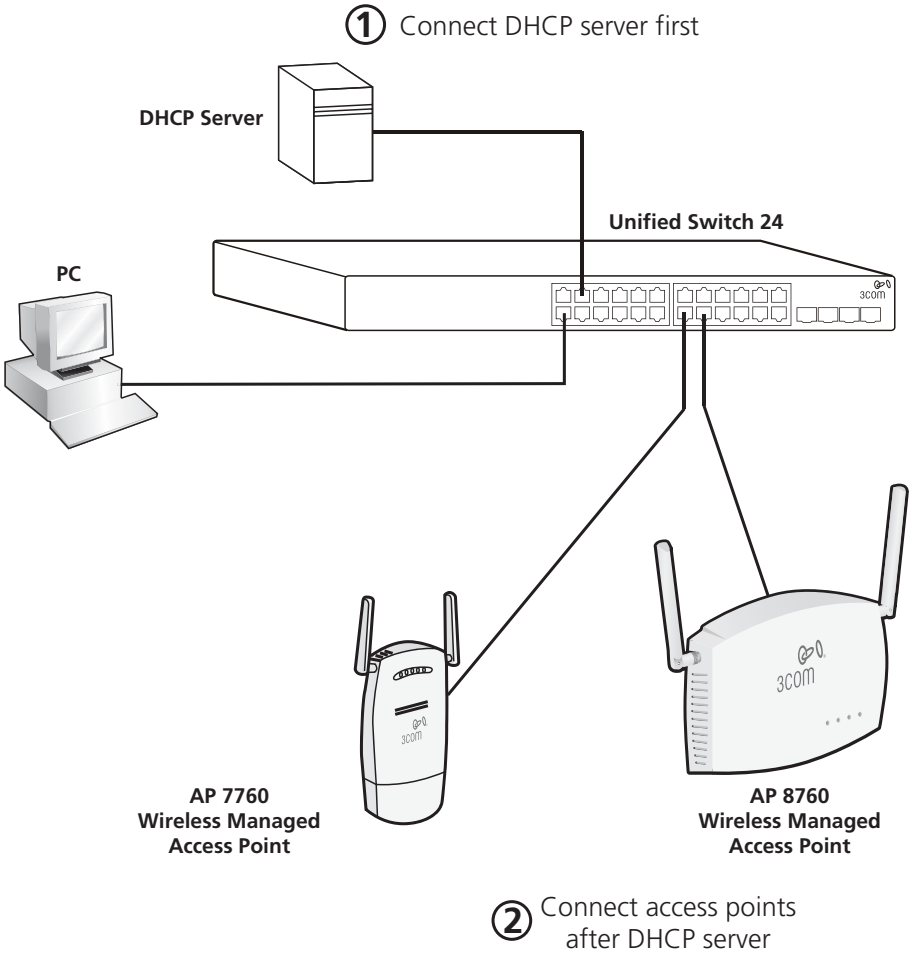
CAUTION: *When you make configuration changes to the switch, you must select* ***Save Configuration*** *to store your settings to the startup configuration. If you do not select* ***Save Configuration****, any modified settings will be lost the next time the switch is restarted.*

CAUTION: *To protect your switch from unauthorized access, you should change the default password as soon as possible. See "Changing the Password" on page 35.*

Preparing the wireless network

To use the wireless features of your switch, you must first connect a DHCP server to the switch. The DHCP server is required to assign IP address to the managed access points. If you are already using a cable, DSL, or traditional router to access the Internet, you may use this router's DHCP functionality to provide IP addresses to the access points.Refer to the figure below.



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To prepare your wireless network follow these steps:

1. Connect the DHCP server to a port on the Unified Switch 24.

   Make sure that the DHCP server is on the same IP subnet and is using the same subnet mask as IP configuration of the switch.

2. Connect the wireless access points to the switch only after you have connected the DHCP server and it is fully operational.

   To prepare the access points, see "Preparing the Managed Access Points" on page 23.

Activating the Managed Access Points

Managed access points must be either directly connected to the switch or connected using a Layer 2 network to the same subnet as the switch. The switch and the managed access points must be on the same Layer 2 subnet in order for them to communicate.

To Discover and Activate the managed access points follow these steps:

1. Ensure the access points are converted to managed access points. (Refer to "Preparing the Managed Access Points" on page 23.)
2. Ensure the access points are connected to the switch.
3. Log in to the Web interface of the switch.
4. Select **Device Summary**, then click the **Wireless** tab.
5. In a short time you should see a list of "Discovered Access Points".
6. Press the **Activate** button for each access point that you want to be controlled by your switch. The switch will take several minutes to activate the access points.
7. When the state has changed to **Activated**, the wireless network is ready for use. You can access the wireless network using the SSID and security parameters you configured in the setup wizard.

NOTE: *When an access point is activated on a unified switch, the access point is imprinted with a special security key (LTK). The LTK is shared between the unified switch and the access point. An access point that has been activated by a unified switch will only communicate with that one switch. If you later wish to activate the access point on a different unified switch, you must clear the LTK by performing a Short Reset on the access point as described in "Resetting Access Points" on page 26.*

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4 Preparing the Managed Access Points

The 3Com® Unified Switch 24 supports these 3Com access points:

- 3Com Wireless 7760 11a/b/g PoE Access Point (3CRWE776075)
- 3Com Wireless 8760 Dual Radio 11a/b/g PoE Access Point (3CRWE876075)

The AP 7760 and AP 8760 are dual function access points and have two start-up modes: *Stand-alone* and *Managed*. The start-up mode determines how the access point operates.

Stand-alone mode: The access point operates as an independent fully-functional standalone device. This is the default operating mode of the access point.

Managed mode: The access point operates as a device that is dependent on the 3Com Unified Switch 24 for management and control. Managed mode is only used if you are operating the 7760 and 8760 with the 3Com Unified Switch 24.

In order to use the access points with the 3Com Unified Switch 24, you must first prepare the access points as follows:

1. Ensure the access point Stand-alone firmware is at the minimum required level.
2. Ensure that a Managed firmware image is present on the access point.
3. Set the access point to Managed mode.

The following sections, "Preparing the 7760 Access Point" and "Preparing the 8760 Access Point", describe how to prepare the 3Com access points for use with your Unified Switch 24.

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Preparing the 7760 Access Point

If you are not familiar with accessing the 3Com 7760 Web interface, refer to the 7760 *Access Point Quick Start Guide*.

1. Log on to the access point Web interface.
2. Check the serial number on the back of the access point.

   If the serial number starts with BA/ or higher, a managed image is already installed. You can skip steps 3 and 4 and go directly to step 5.
3. Ensure the 7760 Stand-alone firmware version is 1.5.25 or greater.
   a. View the firmware version on the **Management -> Firmware Upgrade** page.
   b. Upgrade the Stand-alone firmware if required.

      Get the latest firmware by visiting www.3Com.com. Select **Support & Downloads** then **Downloads & Drivers** and enter the model number (3CRWE776075).
   c. Use the **Management -> Firmware Upgrade** page and set **Image Type** to **Stand-alone** to load the Stand-alone firmware.
4. If the serial number of your access point is not BA/ or higher, you must load a Managed firmware image to the access point.
   a. Get the Managed firmware image by visiting www.3Com.com, selecting **Support & Downloads** then **Downloads & Drivers** and entering the model number (3CRWE776075).
   b. On the 7760, use the **Management -> Firmware Upgrade** page and set **Image Type** to **Managed** to load the Managed firmware.
   c. Click the Upgrade button.
5. Change the access point Start-up Mode from Stand-alone to Managed using the **System Configuration -> System Properties** page.
6. Click the Apply button. The access point will reboot automatically.
7. To make the access point active on your Unified Switch 24, see "Activating the Managed Access Points" on page 21.

Note: *After the access point is in Managed mode, it can no longer be accessed using WIDMan, HTTP, Telnet, or SNMP.* ***An access point in Managed mode can only be discovered and managed by the 3Com Unified Switch 24****. To return the access point to the default Stand-alone mode, refer to "Resetting Access Points" on page 26 of this* Quick Start Guide.

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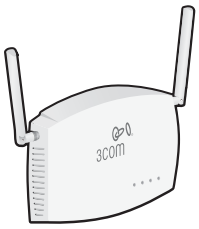
Preparing the 8760 Access Point

If you are not familiar with accessing the 3Com 8760 Web interface, refer to the *8760 Access Point Quick Start Guide*.



1. Log on to the access point Web interface.
2. Check the serial number on the back of the access point.

   If the serial number starts with BA/ or higher, a managed image is already installed. You can skip steps 3 and 4 and go directly to step 5.
3. Ensure the 8760 Stand-alone firmware version is 2.1.13 or greater.
   a. View the firmware version on the **Advanced Setup -> Status -> AP Status** page.
   b. Upgrade the Stand-alone firmware if required.

      Get the latest firmware by visiting www.3Com.com, selecting **Support & Downloads** then **Downloads & Drivers** and entering the model number (3CRWE876075).
   c. Use the **Advanced Setup -> Administration** page and scroll to the **Firmware Upgrade/Local** section to upgrade the Stand-alone firmware.
4. If the serial number of your access point is not BA/ or higher you must load a Managed firmware image to the access point.
   a. Get the Managed firmware image by visiting www.3Com.com, selecting **Support & Downloads** then **Downloads & Drivers** and entering the model number (3CRWE876075).
   b. Use the **Advanced Setup -> Administration** page and scroll to the **Firmware Upgrade/Local** section to upgrade the Managed firmware.
5. Change the access point Start-up Mode from Stand-alone to Managed using the **Advanced Setup -> Administration** page and scrolling to the **Start-up Mode** section.
6. Click the Change Start-up Mode button.
7. After the Configuration Complete message appears reset the access point by clicking the Reset button.
8. To make the access point active on your Unified Switch 24, see "Activating the Managed Access Points" on page 21.

Note: *After the access point is in Managed mode, it can no longer be accessed using WIDMan, HTTP, Telnet, or SNMP.* ***An access point in***

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Managed mode can only be discovered and managed by the 3Com Unified Switch 24*. To return the access point to the default Stand-alone mode, refer to "Resetting Access Points" below.*

Resetting Access Points

AP Recovery

To recover an access point that was inadvertently changed to Managed mode, perform a long reset as described below. The long reset changes the access point's start-up mode back to the factory default of Stand-alone mode. Using a long reset is the only way to return an access point from Managed mode to Stand-alone mode. To perform a long reset, during power-up press and hold the Reset button for at least 20 seconds.

Reset Button

The Reset button on the access points can be used to perform two different types of system reset: a short reset, and a long reset.

Short Reset A short reset deletes the current configuration file and restores the factory settings. The short reset does not change the start-up mode of the access point, so if the start-up mode of the access point is in Stand-alone it will remain in Stand-alone mode. If the start-up mode of the access point is in Managed it will remain in Managed mode.

To perform a short reset, press and hold the Reset button for at least 5 seconds (but not more than 20 seconds).

Long Reset A long reset changes the start-up mode of the access point back to the factory default mode of Stand-alone. This is only used if the access point was inadvertently changed to Managed mode and you want to return it to Stand-alone mode. A long reset is the only way to return from Managed mode to Stand-alone mode.

To perform a long reset, press and hold the Reset button for at least 20 seconds.

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5 Upgrade your Switch to the Latest Software

This section describes how to upgrade your 3Com® Unified Switch 24 to the latest software.

The latest software for your switch can be obtained by visiting www.3Com.com, selecting **Support & Downloads** then **Downloads & Drivers** and entering the model number (**3CRUS2475**).

To provide enterprise-grade redundancy, the switch maintains two software images in memory: Image 1 and Image 2. One image is used to run the switch ("active"), and the other image provides backup redundancy. You can set which image is running and which is redundant.

Loading Software into the Switch

This sections describes how to put a new software image into your Unified Switch 24. To run the new software, see see "Running a New Software Image" on page 28. The switch software can be loaded using HTTP or TFTP. HTTP instructions are listed below. For details on TFTP please refer to the *User Guide*.

To upgrade the switch software using HTTP:

1. Copy the latest switch software from www.3Com.com to your PC.
2. Expand the downloaded software.
3. Log in to the switch Web interface.
4. Select **Administration -> Software Update**.
5. Select **Download via HTTP**.
6. Click **Browse** and locate the software you previously copied to your PC.
7. Click **Apply**.

   The software will be loaded into the software image location that is not active.

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Running a New Software Image

This sections describes how to run software that you have uploaded to the switch. To put the software image into your switch, see "Loading Software into the Switch" on page 27.

To run new software, you must set the image to become active after the switch is reset. The **Active Image** tab identifies which image is currently active and which image will be used after the next reset.

To select new software to run:

1. Select **Administration -> Software Update**, then click the **Active Image** tab.

   The **Active Image** field displays the name of the software image currently in use (either Image 1 or Image 2).

2. Set the **Active Image After Reset** field to the other software image. For example, if **Active Image** displays **Image 1**, set **Active Image After Reset** to **Image 2**.
3. Reset the switch by selecting **Administration -> Reset**.

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6 Restoring the Factory Default Settings

CAUTION: *Resetting the switch to factory defaults will erase all your settings. You will need to reconfigure all settings.*

To reset the switch to factory defaults:

1. Unplug the power cord from the back of the unit.
2. Press and hold the Reset button on the back of the switch.
3. While still pressing the Reset button, plug the power cord into the back of the unit.
4. Continue pressing the reset button for 10 seconds.
5. Release the Reset button.

   The switch is now reset to factory defaults.

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7 Changing the Password

To protect your 3Com® Unified Switch 24 from unauthorized access, you should change the default password as soon as possible.

To change the password:

1. Log onto the switch.
   - The default username is **admin**.
   - The default password is blank (no entry).
2. Select **Administration -> Authentication -> Password Management**.
3. Click the **Modify** tab and enter your new password.
4. Click **Apply**.

   The password has now been changed.

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8 Using SFP Transceivers

This sections describes how to insert and remove an SFP transceiver from an SFP slot.

SFP transceivers are hot-insertable and hot-swappable. You can remove them from and insert them into any SFP port without having to power-off the switch.

Approved SFP Transceivers

The following list of approved SFP transceivers is correct at the time of publication:

- 3CSFP91 SFP (SX)1000BASE-SX SFP transceiver. Use this transceiver to connect the switch directly to a multimode fiberoptic cable.
- 3CSFP92 SFP (LX)1000BASE-LX SFP transceiver. Use this transceiver to connect the switch directly to a single-mode fiberoptic cable or to multimode fiber using a conditioned launch cable.

3Com recommends using only 3Com SFPs on the switch. If you insert an SFP transceiver that is not supported, the switch will not recognize it.

Inserting and using an SFP Transceiver

To insert and use an SFP transceiver, follow the procedure described below.

1. Hold the transceiver so that the fiber connector is toward you and the product label is visible, as shown in Figure 3. Ensure the wire release lever is closed (in the upright position).
2. Gently slide the transceiver into the SFP slot until it clicks into place.

CAUTION: *SFP transceivers are keyed and can be properly inserted only one way. If the transceiver does not click when you insert it, remove it, turn it over, and then re-insert it.*

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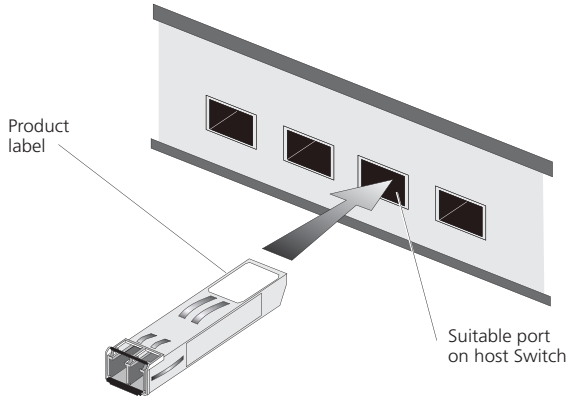
Figure 3 Inserting the SFP Transceiver



3 Check the SFP Module Status LEDs on the front of the switch. The corresponding LED will light to indicate the SFP module is present.

4 Remove the plastic protective cover, if fitted.

5 Connect the fiber cable.

6 The transceiver connects to the network using a duplex LC connector. Attach a male duplex LC connector on the network cable into the duplex LC connector on the transceiver.

7 Connect the other end of the cable to a device fitted with an appropriate Gigabit Ethernet connection.

Removing an SFP Transceiver

Removing an SFP transceiver does not require powering-off the switch.

To remove an SFP transceiver:

1 Disconnect the cable from the transceiver.

2 Move the wire release lever downwards until it is pointing toward you.

3 Pull the wire release lever toward you to release the catch mechanism.

4 The SFP transceiver should slide out easily.

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9 Troubleshooting

For complete troubleshooting information please refer to your *User's Guide* or visit 3Com's World Wide Web site: http://www.3Com.com.

Here are some common problems that can occur.

Forgotten Password

If you forget the password to the Web interface, you will need to reset the switch to factory defaults. See "Restoring the Factory Default Settings" on page 29.

A link is connected, but the Port Status LED for the port is off

There is a problem with this connection. Verify that:

- The device being connected to is powered on and operating correctly.
- The cable is connected at both ends.
- The cable is not damaged.
- If the connection is to a workstation, that the workstation's network interface is installed and configured correctly.
- The correct category of cable is being used for the required link speed. Category 3 cables can be used for 10BASE-T operation only. Category 5 cable is required for 100BASE-TX or 1000BASE-T. 3Com recommends Category 5e or 6 cables for 1000BASE-T operation.

A fiber cable is connected, but the Module Status LED is off

Verify that:

- The fiber cable is in good condition.
- The SFP module is correctly inserted.
- A 3Com® SFP module is being used. Refer to "Using SFP Transceivers" on page 31 for details.
- The equipment at the far end is installed and correctly configured.

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The Port Status LED is on, but network performance is poor

There may be a full-duplex / half-duplex mismatch between the switch and a connected device.

Ensure that the connected device has either:

- Auto-negotiation enabled, or
- The ports are configured for half-duplex operation

Browser cannot find the Unified Switch 24

Make sure that:

- The PC's IP address is in the same IP subnet as the switch.
- The PC's subnet mask matches the subnet mask of the switch.

Trouble discovering the access points

Make sure that:

- The switch's IP address is in the same IP subnet as the DHCP server.
- The switch's subnet mask matches the subnet mask of the DHCP server.

LTK Error message when activating an AP

An LTK error is caused by either of the following situations:

- You are trying to activate an AP is already activated on another unified switch.
- You are trying to activate an AP that was previously activated on another unified switch.

When an AP is activated on a unified switch, the AP is imprinted with a special security key (LTK) that is shared between the unified switch and the AP. An AP that has been activated by a unified switch will only communicate with that one switch. If you later wish to activate the AP on a different unified switch, you must clear the LTK by performing a Short Reset on the AP as described in "Resetting Access Points" on page 26.

If the Problem Persists

If the problem persists refer to the more detailed troubleshooting information in your User's Guide or on the 3Com Web site.

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10 Technical Information

Related Standards

The 3Com® Unified Gigabit Wireless PoE Switch 24 has been designed to the following standards:

Function	IEEE 802.3 (Ethernet, 10Base-T), IEEE 802.3u (Fast Ethernet, 100Base-TX), IEEE 802.3ab (Gigabit Ethernet, 1000Base-T) and IEEE 802.3z (Gigabit Ethernet, 1000Base-X), IEEE 802.3x (Flow Control), IEEE 802.1d 1998 (Bridging), IEEE 802.1p (Virtual LAN), IEEE 802.af (DTE Power)
MAC Address	8192
Safety	UL 60950-1, CSA 22.2 No. 60950-1, EN 60950-1, IEC 60950-1
EMC Emissions	FCC Part 15 Subpart B Class A, EN 55022 Class A, ICES-003 Class A, CISPR 22 Class A, VCCI Class A, EN 61000-3-2, EN 61000-3-3
Immunity	EN 55024, EN 60601-1-2

Environmental

Operating Temperature	0 to 40 °C (32 to 104 °F)
Storage Temperature	–40 to +70 °C (–40 to +158 °F)
Humidity	10 to 95% (non-condensing)
Standard	EN 60068 (IEC 68)

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Physical

Width	44.0 cm (17.3 in.)
Length	41.5 cm (16.3 in.)
Height	4.4 cm (1.75 in.) or 1U.
Weight	5.9 kg (13.0 lb)
Mounting	Free-standing, or 19 in. rack-mounted using the supplied mounting kit

Electrical

Power Inlet	IEC 320
AC Line Frequency	50/60 Hz (±3 Hz)
Input Voltage	100–240 Vac (auto range)
Current Rating	8 Amp (maximum)
Maximum Power Consumption	465 Watts
Maximum Power Dissipation	207 BTU/hr
PoE Maximum Output Power per Port	15.4 watts Power can also be provided by the switch through any of its 24 Ethernet ports based on the IEEE 802.3af Power over Ethernet (PoE) specifications. For PoE to work, the receiving device must be PoE-compliant.

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11 Obtaining Support for your 3Com Product

3Com offers product registration, case management, and repair services through eSupport.3Com.com. You must have a user name and password to access these services, which are described in this appendix.

Register Your Product to Gain Service Benefits

To take advantage of warranty and other service benefits, you must first register your product at:

http://eSupport.3Com.com

3Com eSupport services are based on accounts that are created or that you are authorized to access.

Solve Problems Online

3Com offers the following support tool:

- **3Com Knowledgebase —** Helps you to troubleshoot 3Com products. This query-based interactive tool is located at:

  http://knowledgebase.3Com.com

  It contains thousands of technical solutions written by 3Com support engineers.

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Purchase Extended Warranty and Professional Services

To enhance response times or extend your warranty benefits, you can purchase value-added services such as 24x7 telephone technical support, software upgrades, on-site assistance, or advanced hardware replacement.

Experienced engineers are available to manage your installation with minimal disruption to your network. Expert assessment and implementation services are offered to fill resource gaps and ensure the success of your networking projects. For more information on 3Com Extended Warranty and Professional Services, see:

http://www.3Com.com

Contact your authorized 3Com reseller or 3Com for additional product and support information. See the table of access numbers later in this appendix.

Access Software Downloads

You are entitled to bug fix / maintenance releases for the version of software that you initially purchased with your 3Com product. To obtain access to this software, you need to register your product and then use the Serial Number as your login. Restricted Software is available at:

http://eSupport.3Com.com

To obtain software releases that follow the software version that you originally purchased, 3Com recommends that you buy an Express or Guardian contract, a Software Upgrades contract, or an equivalent support contract from 3Com or your reseller. Support contracts that include software upgrades cover feature enhancements, incremental functionality, and bug fixes, but they do not include software that is released by 3Com as a separately ordered product. Separately orderable software releases and licenses are listed in the 3Com Price List and are available for purchase from your 3Com reseller.

Contact Us

3Com offers telephone, internet, and e-mail access to technical support and repair services. To access these services for your region, use the appropriate telephone number, URL, or e-mail address from the table in the next section.

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Telephone Technical Support and Repair

To obtain telephone support as part of your warranty and other service benefits, you must first register your product at:

http://eSupport.3Com.com

When you contact 3Com for assistance, please have the following information ready:

- Product model name, part number, and serial number
- A list of system hardware and software, including revision level
- Diagnostic error messages
- Details about recent configuration changes, if applicable

To send a product directly to 3Com for repair, you must first obtain a return materials authorization number (RMA). Products sent to 3Com without authorization numbers clearly marked on the outside of the package will be returned to the sender unopened, at the sender's expense. If your product is registered and under warranty, you can obtain an RMA number online at http://eSupport.3Com.com. First-time users must apply for a user name and password.

Telephone numbers are correct at the time of publication. Find a current directory of 3Com resources by region at:
http://csoweb4.3Com.com/contactus/

Country	Telephone Number	Country	Telephone Number
Asia, Pacific Rim — Telephone Technical Support and Repair			
Australia	1800 075 316	Philippines	1800 144 10220 or
Hong Kong	2907 0456		029003078
India	000 800 440 1193	PR of China	800 810 0504
Indonesia	001 803 852 9825	Singapore	800 616 1463
Japan	03 3507 5984	South. Korea	080 698 0880
Malaysia	1800 812 612	Taiwan	00801 444 318
New Zealand	0800 450 454	Thailand	001 800 441 2152

Pakistan Call the U.S. direct by dialing 00 800 01001, then dialing 800 763 6780
Sri Lanka Call the U.S. direct by dialing 02 430 430, then dialing 800 763 6780
Vietnam Call the U.S. direct by dialing 1 201 0288, then dialing 800 763 6780

You can also obtain non-urgent support in this region at this email address apr_technical_support@3com.com
Or request a return material authorization number (RMA) by FAX using this number: +61 2 9937 5048, or send an email at this email address: ap_rma_request@3com.com

Europe, Middle East, and Africa — Telephone Technical Support and Repair

From anywhere in these regions not listed below, call: +44 1442 435529

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Country	Telephone Number	Country	Telephone Number
From the following countries, call the appropriate number:			
Austria	0800 297 468	Luxembourg	800 23625
Belgium	0800 71429	Netherlands	0800 0227788
Denmark	800 17309	Norway	800 11376
Finland	0800 113153	Poland	00800 4411 357
France	0800 917959	Portugal	800 831416
Germany	0800 182 1502	South Africa	0800 995 014
Hungary	06800 12813	Spain	900 938 919
Ireland	1 800 553 117	Sweden	020 795 482
Israel	180 945 3794	Switzerland	0800 553 072
Italy	800 879489	U.K.	0800 096 3266

You can also obtain support in this region using this URL: http://emea.3com.com/support/email.html

You can also obtain non-urgent support in this region at these email addresses:
Technical support and general requests: customer_support@3com.com
Return material authorization: warranty_repair@3com.com
Contract requests: emea_contract@3com.com

Latin America — Telephone Technical Support and Repair

Antigua	1 800 988 2112	Guatemala	AT&T +800 998 2112
Argentina	0 810 444 3COM	Haiti	57 1 657 0888
Aruba	1 800 998 2112	Honduras	AT&T +800 998 2112
Bahamas	1 800 998 2112	Jamaica	1 800 998 2112
Barbados	1 800 998 2112	Martinique	571 657 0888
Belize	52 5 201 0010	Mexico	01 800 849CARE
Bermuda	1 800 998 2112	Nicaragua	AT&T +800 998 2112
Bonaire	1 800 998 2112	Panama	AT&T +800 998 2112
Brazil	0800 13 3COM	Paraguay	54 11 4894 1888
Cayman	1 800 998 2112	Peru	AT&T +800 998 2112
Chile	AT&T +800 998 2112	Puerto Rico	1 800 998 2112
Colombia	AT&T +800 998 2112	Salvador	AT&T +800 998 2112
Costa Rica	AT&T +800 998 2112	Trinidad and Tobago	1 800 998 2112
Curacao	1 800 998 2112	Uruguay	AT&T +800 998 2112
Ecuador	AT&T +800 998 2112	Venezuela	AT&T +800 998 2112
Dominican Republic	AT&T +800 998 2112	Virgin Islands	57 1 657 0888

You can also obtain support in this region in the following ways:

- Spanish speakers, enter the URL: http://lat.3com.com/lat/support/form.html
- Portuguese speakers, enter the URL: http://lat.3com.com/br/support/form.html
- English speakers in Latin America, send e-mail to: lat_support_anc@3com.com

US and Canada — Telephone Technical Support and Repair

All locations:	Network Jacks; Wired or Wireless Network Interface Cards:	1 847-262-0070
	All other 3Com products:	1 800 876 3266

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